

Thank you for the
Opportunity to speak at the
**2023 ICC Outlook
Conference**

Shale **Crescent** *USA*[™]
THE OHIO VALLEY ENERGY ADVANTAGE





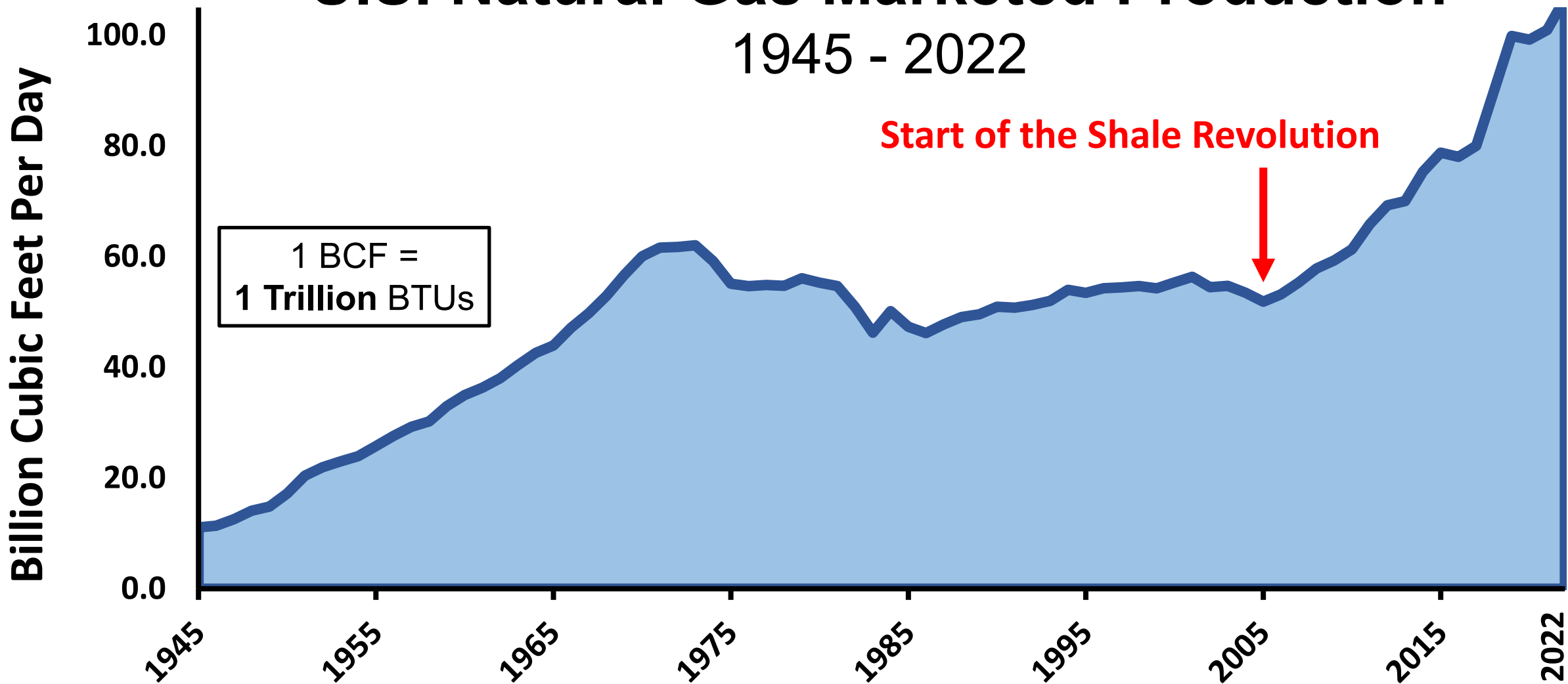
ShaleCrescent USA™
THE OHIO VALLEY ENERGY ADVANTAGE



U.S. Investment Opportunities
=
Build on Top Of the Feedstock
+
Build in the Center of Customers

Build on Top of the Feedstock:

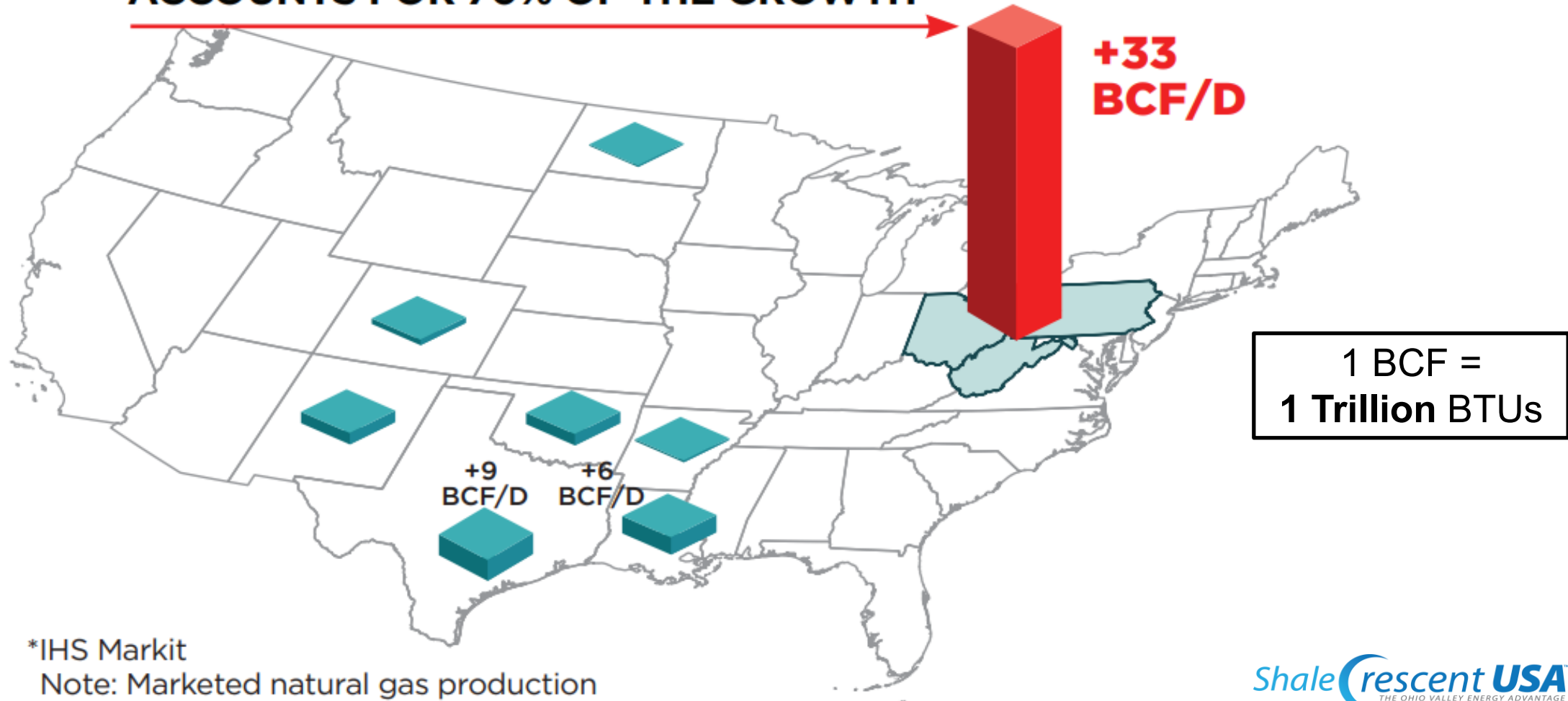
U.S. Natural Gas Marketed Production 1945 - 2022



Build on Top of the Feedstock:

NATURAL GAS PRODUCTION 2008-2022

**SHALE CRESCENT USA
ACCOUNTS FOR 70% OF THE GROWTH**



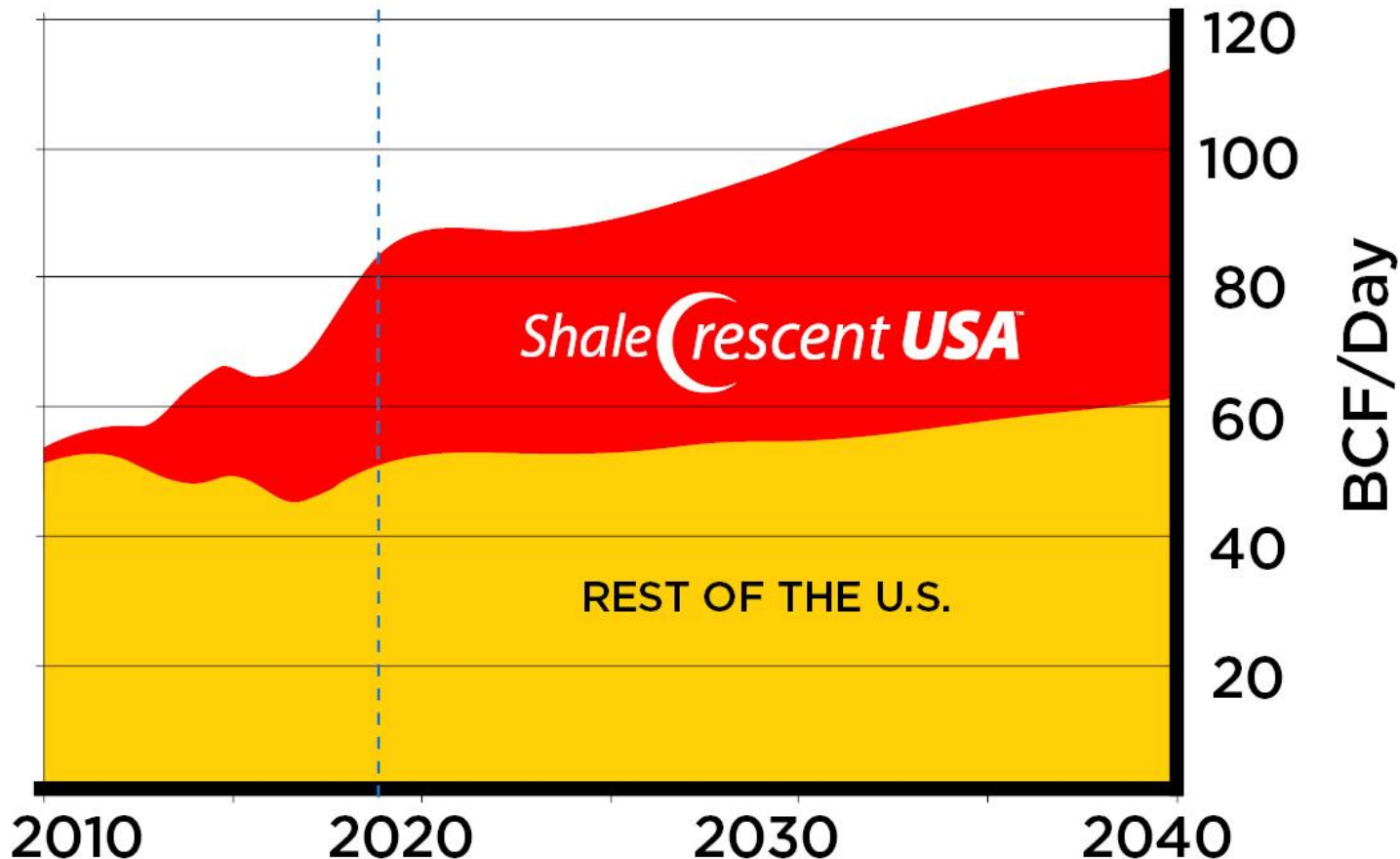
*IHS Markit

Note: Marketed natural gas production

Source: EIA and Shale Crescent USA

Build on Top of the Feedstock:

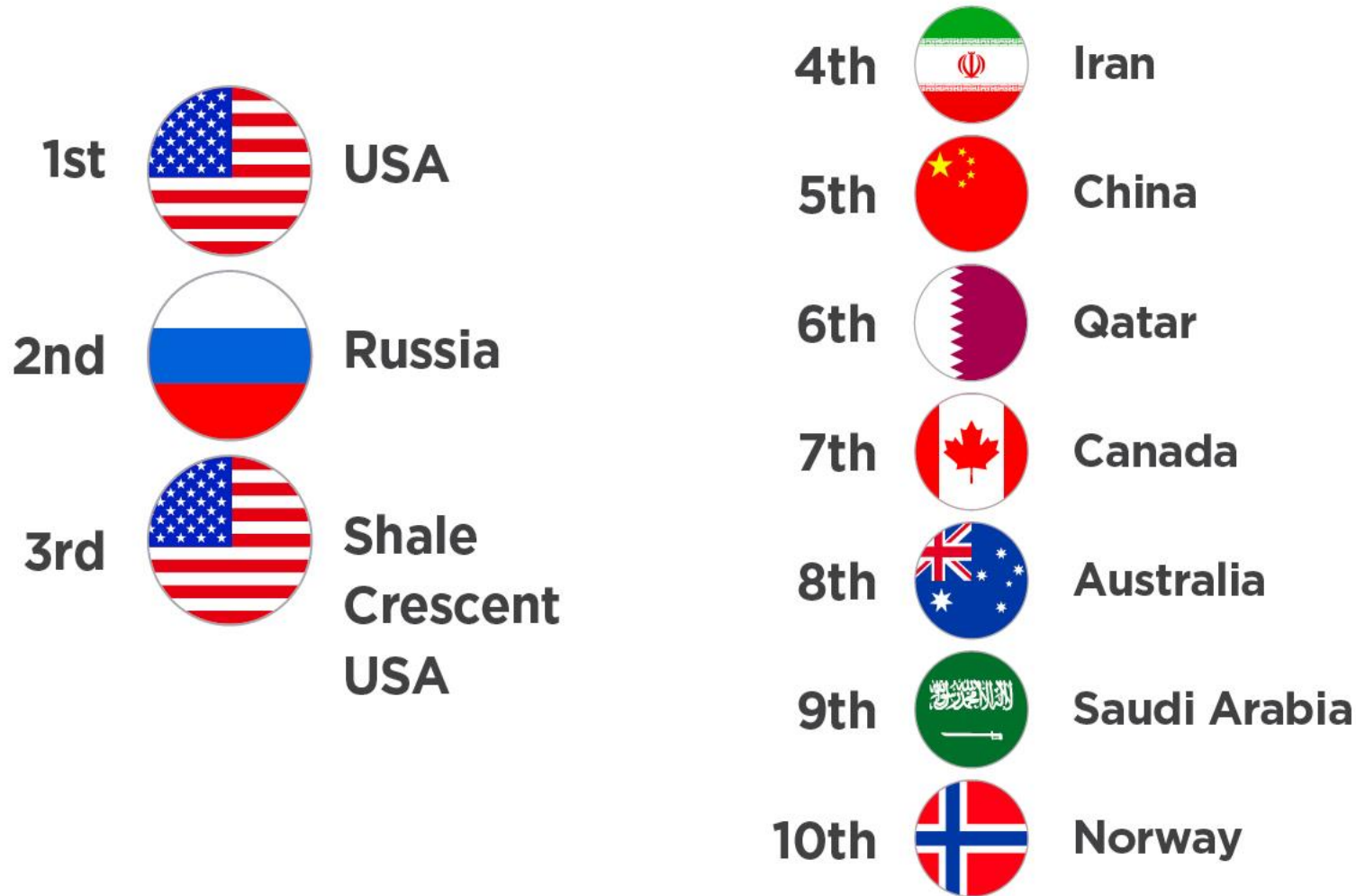
NATURAL GAS PRODUCTION



Shale Crescent USA
is projected to
produce 45%
of all U.S.
Natural Gas
by 2040

1 BCF = 1 Trillion BTUs

Build on Top of the Feedstock:



A new global leader in natural gas production:

- If Shale Crescent USA were a country, it would be the **3rd** largest producer of natural gas in the world.*
- These 9 countries produce nearly **70%** of the natural gas in the entire world.

*Shale Crescent USA is Ohio, West Virginia, and Pennsylvania.

Source: BP Statistical Review, EIA, Shale Crescent USA

Build in the Center of Customers:

SHORTEN SUPPLY LINES

30% of Canadian population within a 1 day's drive

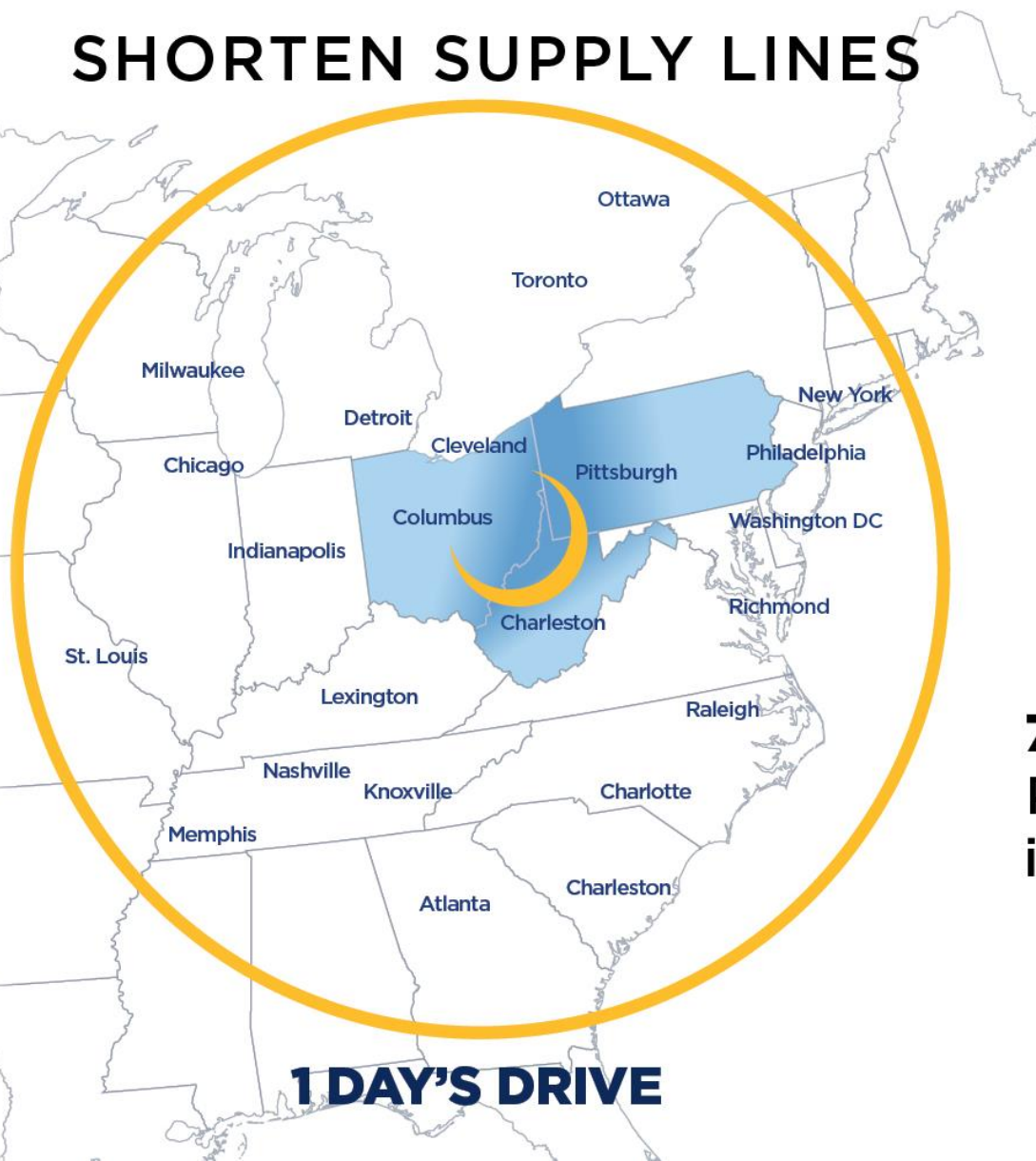
50% of the U.S. population is within a 1 day's drive

MARKET DEMAND

MARKET DEMAND

70% of North American Polyethylene demand is within a 1 day's drive*

77% of North American Polypropylene demand is within a 1 day's drive*

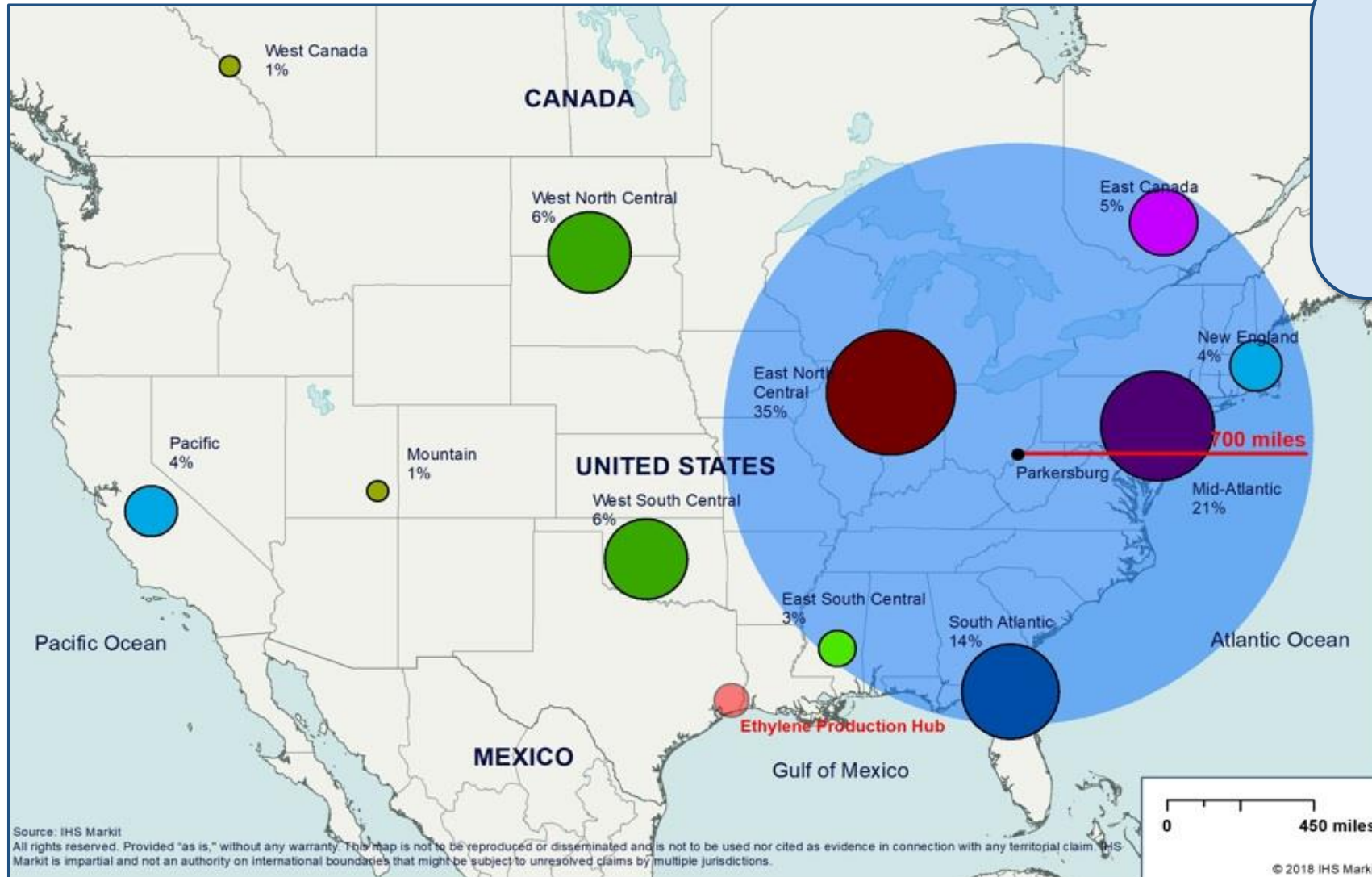


1 DAY'S DRIVE

*Source: IHS Markit

Build in the Center of Customers: Polyethylene

70% of Polyethylene
DEMAND is within a
day's drive.





Profitability

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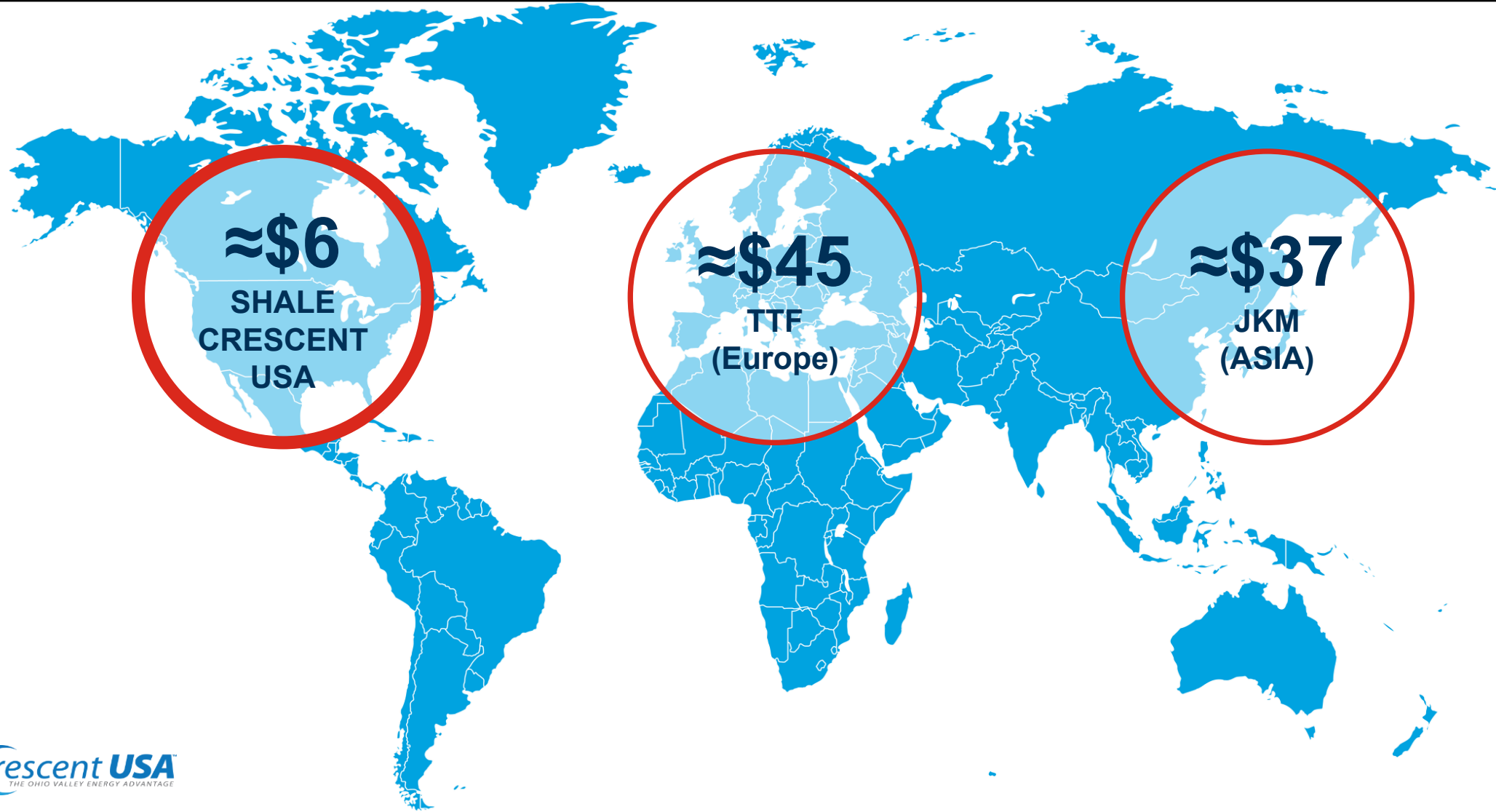
Build on Top
Of the Feedstock

+

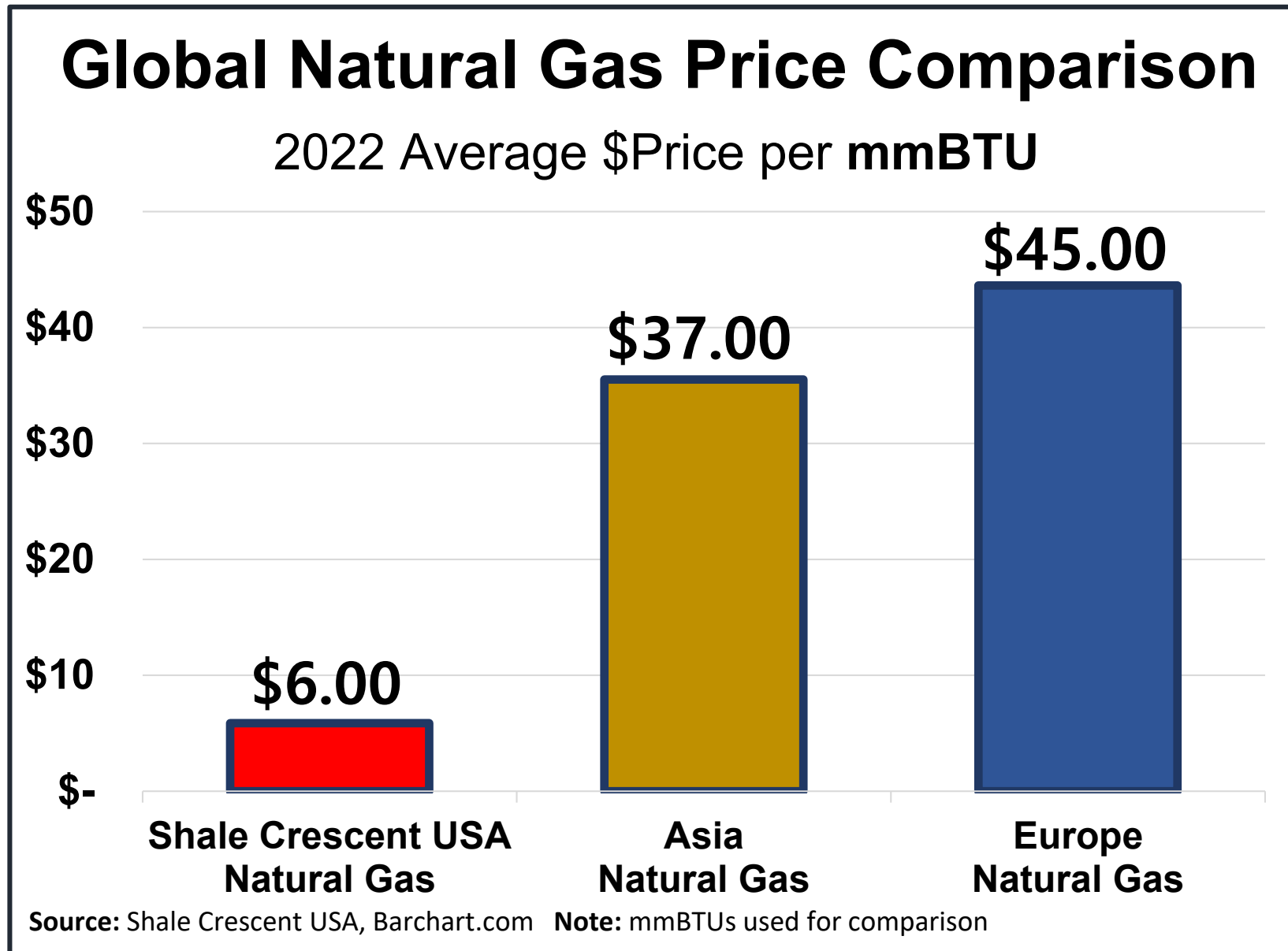
Build in the
Center of Customers

Profitability: Affordable Energy

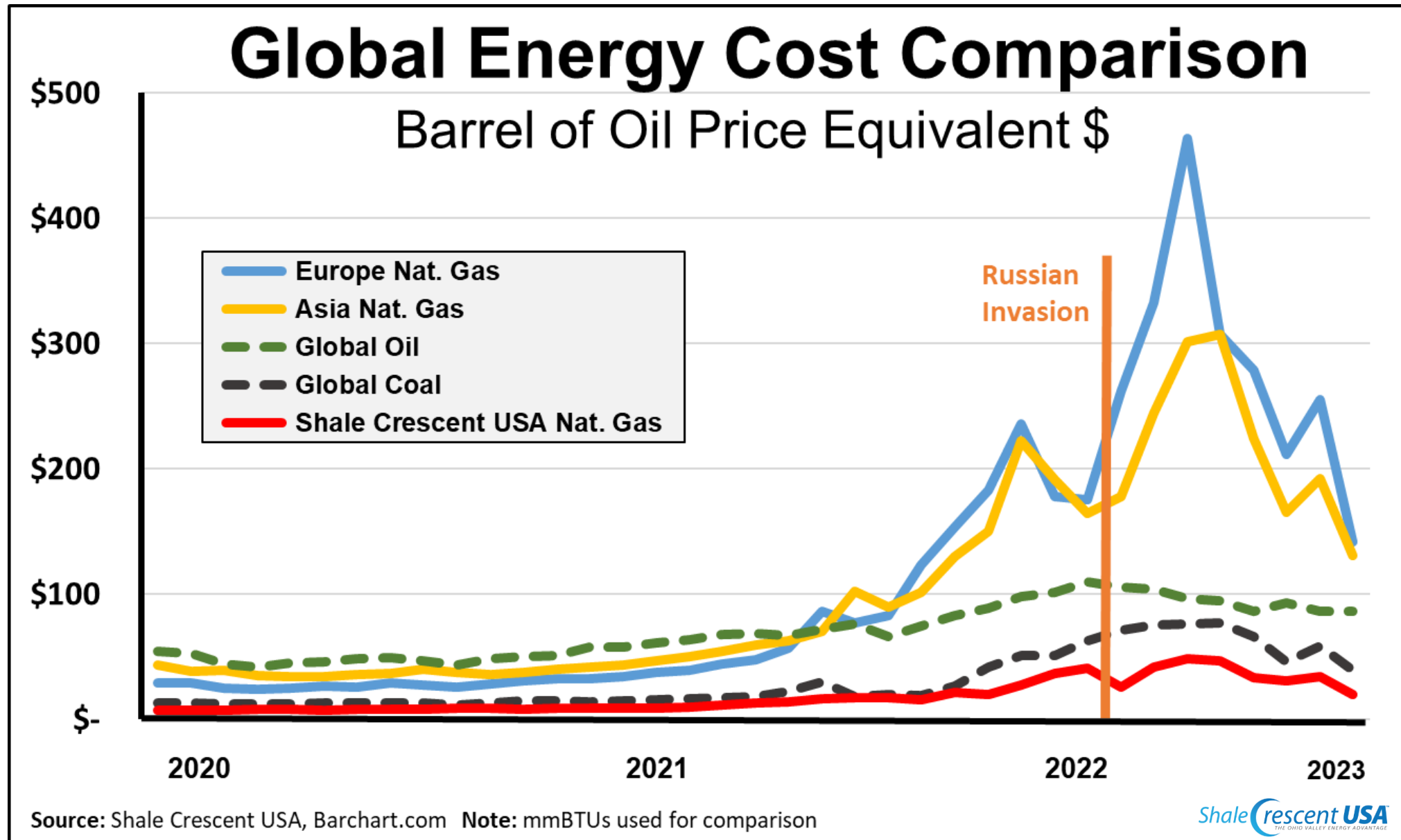
2022 Average Natural Gas \$Price per mmBTU



Profitability: Affordable Energy

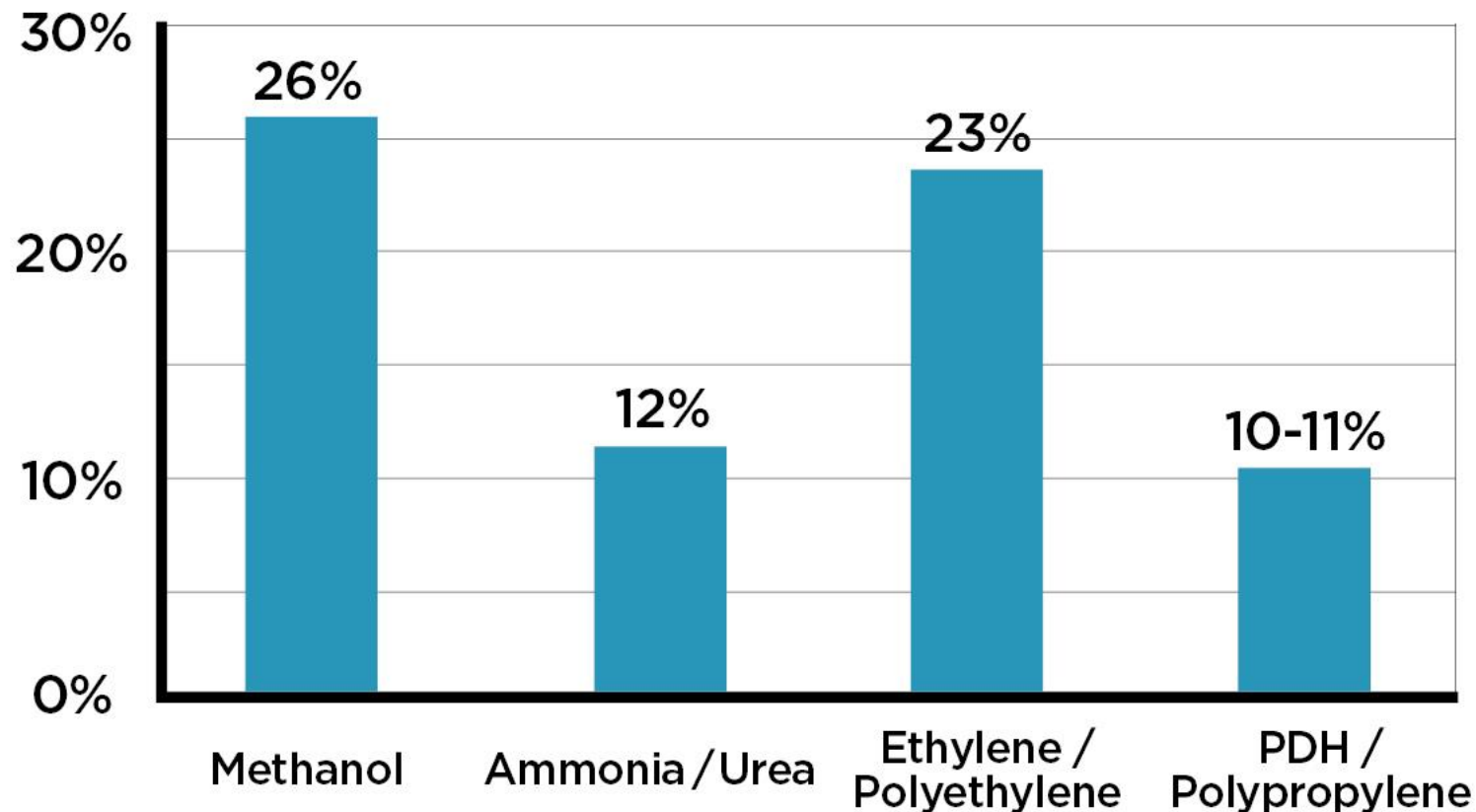


Profitability: Affordable Energy



Profitability: Cost of Manufacturing Advantage

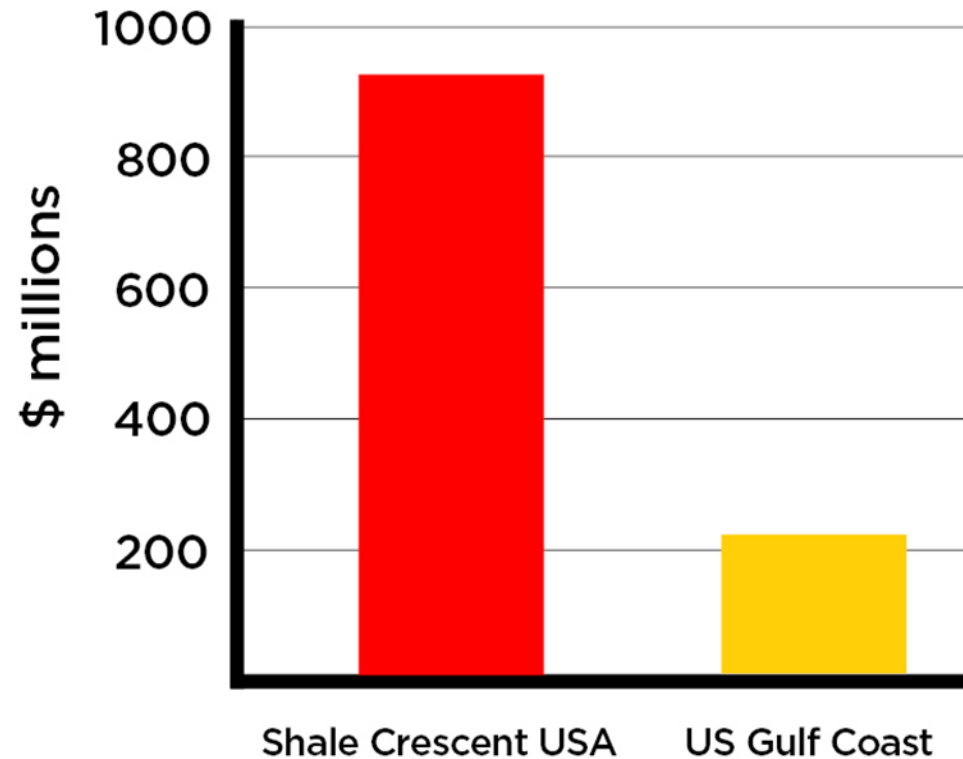
SHALE CRESCENT USA COST ADVANTAGE VS. U.S. GULF COAST (WHEN DELIVERED INTO SCUSA MARKET)



*Source: IHS Markit

Profitability: PE Plant Manufacturing Advantage

NET PRESENT VALUE IN 2020 SHALE CRESCENT USA VS U.S. GULF COAST APPLYING A 15% DISCOUNT RATE



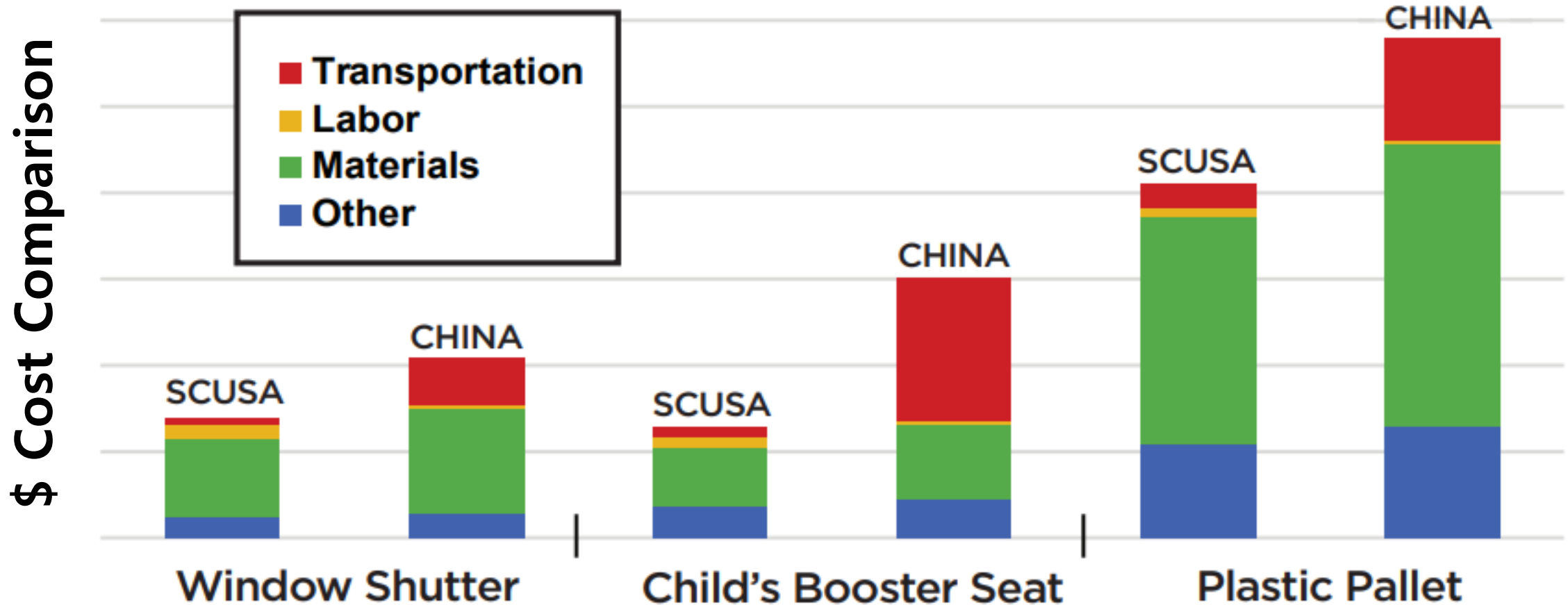
ETHYLENE/POLYETHYLENE FACILITY

*Source: IHS Markit

Profitability: Plastics Converter Cost Advantage

Ohio vs. China

Cost of Manufacturing & Transportation



Other: Equipment, Maintenance, Electricity, Lease, Packaging, Working Capital

Water & Transportation Advantage:

ABUNDANT WATER FOR TRANSPORTATION & PROCESSING



- **Manufacturers and businesses** in the Shale Crescent USA have **easy access to water** for transportation and processing, via the Ohio River and its tributaries. The **Ohio River discharges 180 billion gallons** of water each day into the Mississippi River.

New Investments:

**THIRUMALAI, STRATEGICALLY LOCATED IN SHALE CRESCENT USA.
CLOSE TO NGL SOURCES AND FINAL CUSTOMERS.**



Thirumalai Chemicals

- World Class facility to produce Food Ingredients & Maleic Anhydride
- Production beginning mid-2024
- The investment will satisfy the growing demand in the US and reduce import dependence

World Class Companies: Investing billions of \$Dollars in the Shale Crescent USA.

Manufacturers are Capitalizing
on Shale Crescent USA
World Class Advantages:

- Secure & Abundant Energy
- Short Supply Lines
- Increased Profitability
- Reduced Emissions.



And many other world class companies.



No Cost Consulting & Site Selection Services



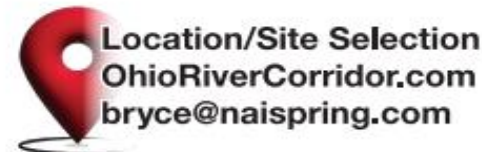
American Electric Power
Provides comprehensive support for businesses relocating or expanding. AEP's economic & business development team provides resources & services **at no cost.**

600 + Available Sites
(Developed & Undeveloped)

Thank You & Contact Us For:

**Powerful Research & Assistance
to Capitalize on World-Class Opportunities**

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